

REMARKS

Favorable reconsideration and allowance of the claims of the present application are respectfully requested.

Before addressing the specific grounds of rejection raised in the present Office Action, applicants have amended Claim 1 to positively recite that both the metal inductor wires and the metal bond pad are located on a surface of a dielectric material, said dielectric material represents a final interconnect level of an interconnect structure. Support for these amendments to Claim 1 is found throughout the specification of the instant application. See, for example, paragraph [0031], FIG. 2 and paragraph [0036].

Since the above amendments to Claim 1 do not introduce new matter into the specification of the instant application, entry thereof is respectfully requested.

Claims 1-4 and 7-9 stand rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of U.S. Patent No. 5,529,831 to Waga et al. ("Waga et al.") and U.S. Patent No. 6,027,999 to Wong ("Wong"). Claim 5 stands rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of Waga et al., Wong and U.S. Patent Application Publication No. 2003/0076209 to Tsai et al. ("Tsai et al."). Claim 5 stands rejected under 35 U.S.C. § 103 as allegedly unpatentable over the combined disclosures of Waga et al., Wong and U.S. Patent No. 6,903,644 to Wang et al. ("Wang et al.").

Applicants respectfully submit that the claims of the present application are not rendered obvious from the combined disclosures of (i) Waga et al. and Wong, (ii) Waga et al., Wong and Tsai, et al., and (iii) Waga et al., Wong and Wang et al. Specifically, none of the prior art disclosures, taken in combination with each other, teach or suggest that an RF structure which includes a dielectric material having metal inductor wires of a first thickness and a metal bond

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pad having a major area of a second thickness *both are located on a surface thereof*, wherein said first thickness is greater than said second thickness and *said dielectric material represents a final interconnect level of an interconnect structure*.

Waga et al. provide a thin film dielectric device (see FIG. 9) comprising a substrate 22 which is magnetic and has dielectric properties, coils 23 formed on the surface of the substrate 22 and a magnetic medium connect portion 22a that extends from the substrate 22. Although not shown in FIG. 9, it is disclosed that the structure includes an upper most interlayer insulator film 38 formed over the magnetic film 30 which is an extension of layer 22A in the structure illustrated in FIG. 9. See Col. 8, lines 18-26. Applicants submit that Waga et al. do not teach or suggest the claimed thickness for the metal bond pads and the metal inductor wires. Also, Waga et al. do not teach or suggest a structure in which both the metal bond pads and the metal wire inductors are located on the surface of a dielectric material, which dielectric material represents the uppermost interlevel dielectric (i.e., final interconnect level) of an interconnect structure. Instead, Waga et al. show that the bond portion 22a is thicker than the metal inductor wiring 23, which is opposite to the claimed invention. Additionally, Waga et al. disclose forming both the bond portion 22a and the metal inductor wiring 23 on a substrate have both magnetic and insulating properties and that an uppermost dielectric of an interconnect structure is formed above both the bond portion 22a and the metal inductor wiring 23.

Wong does not alleviate the above defects in Waga et al. Specifically, Wong provides a LCD IC device that includes pixels 42 and a bond pad 30. The bond pad 30 is formed in one of the interlevel dielectrics (e.g., dielectric 36), and the pixels 42 are formed atop dielectric 36. Although Wong illustrates that the pixels have a thickness that is less than the bond pads, both

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the bond pads and the pixels are not located on the uppermost dielectric of an interconnect structure.

In view of the above, the obviousness rejection citing the combination of Waga et al. and Wong has been obviated. Reconsideration and withdrawal of the instant § 103 rejection is thus respectfully requested.

With respect to the combination of Waga et al., Wong, and Tsai et al., applicants submit that Waga et al. and Wong are deficient for the same reasons mentioned above. Tsai et al. do not alleviate the defects in the combination of Waga et al. and Wong since the applied secondary reference also does not teach or suggest the claimed structure including a dielectric material having metal inductor wires of a first thickness and a metal bond pad having a major area of a second thickness *both are located on a surface thereof*, wherein said first thickness is greater than said second thickness and *said dielectric material represents a final interconnect level of an interconnect structure*.

Tsai et al. provide a new method and structure to connect a planar, spiral inductor to an underlying interconnect metal, the patterned interconnect metal having been created over a semiconductor surface. A layer of dielectric followed by a layer of passivation is deposited over the semiconductor surface, including the surface of the underlying interconnect metal. Large first vias are created through the layers of passivation and dielectric. The large first vias align with the patterned interconnect metal, providing low-resistivity points of interconnect between the spiral inductor, which is created on the surface of the layer of passivation concurrent with the creation of the large first vias, and the patterned interconnect metal. A thick layer of polyimide is deposited over the surface of the layer of passivation, including the surface of the spiral

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inductor and the large first vias. Applicants observe that the prior art structure disclosed in Tsai, et al. does not teach or suggest any of the claimed features.

In view of the above, the obviousness rejection citing the combination of Waga et al., Wong and Tsai et al. has been obviated. Reconsideration and withdrawal of the instant § 103 rejection is thus respectfully requested.

With respect to the combination of Waga et al., Wong, and Wang et al., applicants submit that Waga et al. and Wong are deficient for the same reasons mentioned above. Wang et al. do not alleviate the defects in the combination of Waga et al. and Wong since the applied secondary reference also does not teach or suggest the claimed structure including a dielectric material having metal inductor wires of a first thickness and a metal bond pad having a major area of a second thickness *both are located on a surface thereof*, wherein said first thickness is greater than said second thickness and *said dielectric material represents a final interconnect level of an interconnect structure*.

Wang et al. provide a structure including a first coil conductor located 310 over a substrate 120 and having a first conductivity and a first pattern; and a second coil conductor 510 located on a substantial portion of said first coil conductor 310, having a second conductivity substantially greater than said first conductivity, and having a second pattern substantially conforming to said first pattern. Applicants observe that the prior art structure disclosed in Wang, et al. does not teach or suggest any of the claimed features.

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In view of the above, the obviousness rejection citing the combination of Waga et al., Wong and Wang et al. has been obviated. Reconsideration and withdrawal of the instant § 103 rejection is thus respectfully requested.

The various § 103 rejections also fail because there is no motivation in the applied references which suggest modifying the disclosed structures to include the various elements recited in the claims of the present invention. Thus, there is no motivation provided in the applied references, or otherwise of record, to make the modification mentioned above. "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re Vaeck, 947 F.2d, 488, 493, 20 USPQ 2d. 1438, 1442 (Fed.Cir. 1991).

The rejections under 35 U.S.C. § 103 have been obviated; therefore reconsideration and withdrawal thereof is respectfully requested.

Thus, in view of the foregoing amendments and remarks, it is firmly believed that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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